



## Personalised Universalism in the Age of Algorithms

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*Published in:*  
Universalism in Public Service Media

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*Publication date:*  
2020

*Document Version*  
Publisher's PDF, also known as Version of record

[Link to publication from Aalborg University](#)

*Citation for published version (APA):*  
Sørensen, J. K. (2020). Personalised Universalism in the Age of Algorithms. In G. Lowe, P. Savage, & M. Medina (Eds.), *Universalism in Public Service Media: RIPE@2019* (pp. 191-205). Nordicom. Re-Visionary-Interpretations of the Public Enterprise (RIPE) No. 9 <https://www.nordicom.gu.se/sv/publikationer/universalism-public-service-media>

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## Chapter 11

# Personalised universalism in the age of algorithms

Jannick Kirk Sørensen

### Abstract

In this chapter, I address a complex relationship in linking the principles of universalism and personalisation as a tension of considerable importance in contemporary media use. The paradoxical aspects of this relationship are especially evident when treated in the light of ideal types and praxis in legacy public service broadcasting (PSB) and digital public service media (PSM). The relationship is viewed from five angles, culminating in discussion about the materiality produced by shifting technologies in the digital environment and its bearing on the ideological concept of public service in media. The author introduces a new orientation for PSM: personalised enlightenment.

**Keywords:** digital platforms, enlightenment mission, universalism mission, recommender systems, collaborative filtering, global media

### Introduction: Broadcasting and personal communication

Broadcasting is one of the twentieth century's most influential forms of mass communication and was initially a failed invention. Early attempts to harness the “wireless telegraph” for private (mainly business) communication failed due to the physical properties of radio waves. Lacking encryption, everybody could listen to a conversation (Lewis, 1991) and that inherently ruled out private communication. Radio technology was better suited for a public purpose. In this iteration, it grew rapidly and became a worldwide phenomenon of mass communication. Less than ten years from its application as a mass medium, European countries systematised public service broadcasting (PSB) as the preferred orientation. In the context of growing threats from communism in the East and fascism in the West, governments believed radio was too valuable to be “given away” to commercial exploitation –due to broadcasting's potential for both contributing to social development and misuse that could harm societies. The development of radio went differently in the US – but not entirely,

because there, too, the idea of public service was fundamental to the legitimacy of broadcasting (see Barnouw, 1966; Flichy, 1995; Lewis, 1991).

The much-celebrated ideal of universalism is embedded in the notion of broadcasting, which has been generally understood as a ubiquitous coverage of transmitted signals across the breadth of a national territory. This notion can be understood as a side effect of early radio technology that depended exclusively on amplitude modulation (AM radio) and therefore had a large “footprint”, combined with governmental desires to regulate a medium that nearly everyone believed to be powerful in its potential to influence the public for good or ill. Today, broadcasting is no longer as dominant. Moreover, the early interest to harness radio waves for private communication has been operationalised with advances in encryption technologies. Mobile phones, Wi-Fi, Bluetooth, 4G, and 5G all make use of radio waves, but not for broadcasting.

A private, encrypted, client-server configuration has become the dominant mode of distance communication in the Internet era. Even broadcasting and other mass media content is increasingly distributed via the Internet on platforms that provide personalised and on-demand services. What does this mean for the celebrated concept of universalism that has been fundamental to the legitimacy of PSB? In particular, can the universalism principle be maintained as a core value proposition for public service media (PSM) in the light of this increasingly sweeping “return” to individual communication?

In the mass media era when broadcasting was a dominant medium, universalism of coverage was mandated for transmission media that are characterised by one-way communication flows. Programming choices and scheduling practice reflected norms that mattered to an elite who decided what would be appropriate for “the masses” (Tracey, 1998). The PSB mission of advancing enlightenment had a nearly religious importance as a quasi-evangelistic concept of one voice speaking truth to the masses (Scannell, 2005). A convincing case has been made that the religious convictions of the first director general of the British Broadcasting Corporation (BBC), John Reith, had an important contributing role in shaping the universalism ideal as fundamental to broadcasting (see especially *The Reith Diaries* by Stuart, 1975). Paddy Scannell (2005) alluded to that tradition in arguing for PSB as a generous form of dissemination that does not calculate the profitability or concern itself overmuch with the effect of speaking truth.

Partly because of his commitment to the universalism mission in broadcasting, Reith was not fond of the idea that the BBC might transmit more than one radio channel. Pressure from listeners with different music preferences and other demands eventually led to segmented radio programming, arguably the first deviation from universalism in broadcasting (Scannell, 1989; see also Jauert & Lowe, 2005). Scholarly literature on scheduling strategies and the development of channel portfolios demonstrate the changing identity of PSB

in the late twentieth and early twenty-first centuries (Lowe & Hujanen, 2003; Søndergaard, 1994; Steemers, 2003; Ytreberg, 2000; also see Lassen's chapter in this collection).

With on-demand services, and particularly personalised recommendation systems, the functional impact of scheduling and profiling as means for achieving universalism is fading. The decline marks a co-related decrease in the agenda-setting role of PSM (compared to PSB). Today, agenda-setting is part of the dark matter of algorithmic recommendation systems, a realm where even programmers and data scientists can't always explain why a specific piece of content is recommended to a specific user. I will assess this dystopian narrative using case studies of PSM implementations of recommender systems to ask whether the personalisation of media actually threatens the universalism mission of PSM.

## Deconstructing (public national) universalism

Universalism was interdependent with broadcasting, which features an allocation structure of communication (i.e., a one-way flow) that prioritises equity in communicative intentions. There is some opportunity for feedback, but it is weak and not very direct. Examples include the involvement of listeners, viewers, and users via phone-ins to talk programmes, workshop studios for citizens to produce radio programmes, and uploading user-generated content and comments online. But the basic communicative configuration is a one-way flow from a centralised source to mass audiences – even if self-selected and not necessarily all at the same time, but rather over some period of time due to on-demand affordances.

The utility of universalism has been weakened in parallel with the growth of digital platforms and channels. As a result, the normative framework that legitimates universalism as a public service mission has been eroded, although the principle of universalism remains one of PSM's most basic value propositions – albeit only in national contexts. More or less universally, PSM is still required to pursue the historic PSB mission of promoting national cultures and facilitating national democratic and political communication. The universalism of PSM is localised to each nation rather than universalised to the global media ecology. A governmental logic defines the boundaries of PSM universalism. Apart from a few genres such as drama co-productions and the retransmission of music, much of the programming and content of PSM is centred on the national as the priority purview for cultural and political construction.

While PSM remains a largely national project – or series of projects – media systems are no longer that. Media corporations, markets, and systems are increasingly global. This accounts for a tension between the normative basis for PSM and the operational realities of its enactment. Examining European

initiatives to personalise PSB web pages, Sørensen (2011) observed this tension as a contradiction between the concepts of PSB and personalisation; where the former ideally speaks to the unity of citizens within a nation, the latter seeks to serve individuals and as consumers. This tension begs the question of whether PSM organisations might be ignoring (or even betraying) their remits when offering personalised services? As we shall see, the answer depends on how one constructs the focal concepts of universalism and personalisation, from a theoretical standpoint and in describing PSM praxis.

In simple terms, if national public universalism is understood as “every citizen receiving the same information”, then the customer sovereignty proposition of on-demand personalisation is not perhaps appropriate for PSM. If the algorithm only reflects the customer’s desires as an obedient servant, butler, or agent, then PSB’s historic role as an agenda-setter and source of enlightenment is undermined. Everyone is free to live in a personal “filter bubble” (Pariser, 2011). In this perspective, recommender systems pose a threat to democracy (Sunstein, 2007). Subsequently, it has been suggested that policies and software systems need to ensure diversity of citizen exposure to media content (Burri, 2015; Helberger, 2012; Schmidt et al., 2018; Sørensen & Schmidt, 2016). That hints at a degree of paternalism that is problematic today, and was never all that popular earlier. But it also points to the dilemma involved with ensuring universalism as a matter of no small importance for democracy in practice. We will return to this.

As Bozdag and van den Hoven (2015) pointed out, objections to the idea that algorithms are anti-democratic depend on the type of democracy one is contemplating. The liberal type is concerned that information and opinions have equal chances for exposure and influence in a “marketplace of ideas”. Deliberative or participatory types of democracy are more concerned that all opinions can be heard, and to the extent possible, that they are heard by all. Whichever type, there is a shared sense of societal unease in what is perceived as relocating decision-making power from human agency to technical algorithms. Some of this concern is certainly overblown, but the issue is highly relevant to considerations of universalism in PSM.

If universalism is understood as a prerequisite for deliberative democracy, then one argument against personalisation and the growing importance of algorithms to facilitate that is that all the opinions that matter won’t be heard and therefore cannot be considered by all citizens. This is more than a little naïvely optimistic, given that all opinions were never heard or considered even in the monopoly era, but concerns about voice and empowerment have continuing pertinence. If, however, universalism is understood in the light of representative democracy, then the concern is mainly about the accessibility of services and information for all citizens. Thus, while one perspective on democracy prioritises a diversity of sources and voices, the other prioritises accessibility

of contents and services. Both care about universalism, but not necessarily in the same sense or with the same prioritisation.

Concerns about personalisation increasingly centre on three issues: privacy problems related to collection and ownership of user profile information (Sørensen & Van den Bulck, 2018; Sørensen & Kosta, 2019), the opaqueness of algorithms (Bucher, 2018; Zarsky, 2016), and the fear that personalised media recommendations would lead to bias and filter bubbles (Pariser, 2011; Sunstein, 2007). While legitimate concerns, it has been difficult to prove that algorithms for news recommendations create filter bubbles because the evidence suggests human editors are slightly more biased in practice (Möller et al., 2018). Moreover, the assumption that recommender systems perfectly echo a user's personal interests and desires may be wrong. It is actually rather difficult to produce relevant recommendations for new users because data is sparse and only accumulates over time with use. Even for loyal users, after a period of use, the relevancy of recommendations may decline as they become too predictable (called over-fitting). In both cases, or at both ends of the use curve, the balance between relevancy and diversity is difficult (Castells et al., 2015). This balance is important in an editorial context, and equally in the context of e-commerce. There is considerable commercial potential in exposing users to adjacent content that will be new to them rather than always only linking to the same things. By extending the user's circle of interests, the media service can grow enjoyment (via discovery) and loyalty.

### Public service media's personalisation dilemma

Since the end of PSB monopolies, these organisations have kept an eye on methods used by private media to optimise audience contact and satisfaction (Søndergaard, 1994). In recent years, PSM companies have been inspired by the implementation of personalisation in private media (Bodó, 2019; Kunert & Thurman, 2019; Thurman & Schifferes, 2012) to launch initiatives of the same kind in developing and improving personalisation (Sørensen & Hutchinson, 2018; Sørensen, 2013; Van den Bulck & Moe, 2017). This creates editorial and policy dilemmas for PSM (Sørensen, 2018, 2019). Should the algorithm apply the same selection criteria as the programming policies for broadcast scheduling which prioritise diverse programming and fair representation of different viewpoints? Is it even possible to apply broadcast criteria to on-demand content (Sørensen & Schmidt, 2016)? How should oversight of algorithms be handled to ensure the quality control that is expected of the PSM content and service offer? How best to explain the rationale and criteria behind the recommendations that users receive? Can PSM replicate the human-centred meaning and logic that is embedded in programming and scheduling in the mathematical

logic of algorithms? How to maintain PSM's distinctive "tone of voice", which has much to do with credibility as well as brand identity, when recommended content is not determined by human agency? Should user behaviour data collected by a PSM recommender system be looped into the editorial process as indicators of met or unmet demands, or of market potential? Finally, can a contracted technology provider be trusted to do this right, or is it strategically wiser to build up in-house expertise?

Sørensen (2019) presents a case study of how nine European PSM companies implemented algorithmic recommendation. Pöschhacker and colleagues (2018) present a study of personalisation at Bayerische Rundfunk (BR) in Germany. Both studies indicate that while noted dilemmas are the same across PSM organisations, the approaches taken by various companies differ but always reflect organisational values and cultures. There are also indications of hesitance and uncertainty. Regarding the former, an example is the approach to ensuring diversity in recommendations. While diversity in Germany and Sweden is a central requirement for their recommender systems, in Denmark and several other countries, this receives less attention. Another example hinges on the question of whether it is better to control the technology internally or to outsource algorithmic personalisation? If outsourcing, the only options are to contract the service from commercial providers. This, too, is addressed differently across organisations. Finally, a sign of PSM's hesitance about personalisation is evident in the position of algorithmic recommendations on the screen, which are typically placed in less noticeable locations on the webpage and means users are less often and less directly exposed to them.

Although understandings of personalisation – and interest in this – varies across PSM organisations, managers in every company are challenged by an emerging tension between universalism as ensuring content exposure to everyone, and individualism as algorithmically selected content. This tension goes to the heart of a core value proposition of PSM as guarantors of societal coherence. It also reflects a professional tension within PSM organisations between professionals who are responsible for creating meaning by producing programmes and others who are responsible for optimising the potential for exposure – that is, data scientists, data curators, and marketing departments.

Editors are situated between the two communities and are responsible for safeguarding the truth, accuracy, and fairness of all output, and thereby taking care of the public image of PSM in context. Importantly, in many implementations of PSM recommender systems, the editors have hands-on control of the algorithm. This happens through keyword tagging of content, curating lists and categories of content, and creating rules that govern the system. Unrefined user-based recommendations can be overruled by editorial decisions.

In general, the personalised recommendations of PSM content emphasises continuity by providing a centrally curated universalism that is understood

from a heritage rooted in broadcast channel curation. This has so far eclipsed the promise of optimised exposure and increased customer loyalty that are potential benefits of implementing algorithmic recommender systems. Provocatively put, PSM organisations present users with the same content, only with slightly different sequences and prioritisation schemas. In the PSM context, then, recommender systems are a nudging tool to encourage more viewing of the institution’s output, rather than a tool that supports the user as a “customer king” choosing from a broad array of options (Schipper, 2002).

## Globalised technological universalism

The personalisation concept is a fundamental and instrumental feature of the global e-commerce industry. The first large-scale application of algorithmic recommendation is generally attributed to Amazon. Their business model depended on expanding and improving customer exposure to the variety of books available in its online inventory. The operational format is the familiar “other users also bought” collaborative filtering algorithm (Bobadilla et al., 2013; Borchers et al., 1998). This became the core asset for online shopping on the Amazon platform. As the breadth and depth of products expanded far beyond virtual bookshelves, findability and inventory management also depended on algorithms (Linden et al., 2003). Thus, recommender systems were developed as a practical answer to the problem of efficiently handling extreme product heterogeneity.

Algorithms analyse data to identify patterns in consumer behaviour that are presumed to indicate one’s personal interests. Those interests are compared with larger patterns of interest among other consumers with similar tastes or needs. The algorithm brings order, establishes hierarchy, and creates coherence among the nearly uncountable volume of items for sale via Amazon. The algorithms used for this and other Internet services are attempts at “bringing order to the web” as Google founders Page and Brin titled their paper on the Google web search engine (Page et al., 1998). In this light, it is interesting that algorithmic filtering and structuring are being applied by PSM which, according to its core value proposition, should already offer a properly structured and well-ordered filtering of the world’s complexities presented in content. One could get the idea that PSM organisations do not trust their own organising principles.

The ubiquitous dissemination of smart phones, tablets, and computers has encouraged a new dimension of universalism, here described as globalised technical universalism. A paradigm of universally applied technical standards now dominate how audio, video, images, and texts are distributed and displayed on different devices. The language of coding and principles of interface design have become universal, and thus the contents and services offered on popular



platforms can only be universally accessed if they adhere to the general coding and design requirements that pertain to a platform.

This equally applies to every user due to the requirement to have a personal username, password, and profile in order to log in to most platforms. Even the algorithms that recommend content have become universal. A few very popular methods are increasingly common, especially content-based filtering (Lops et al., 2011) and collaborative filtering (Sarwar et al., 2001). These technologies are embedded in nearly every current recommender system. In technical terms, then, universalism has never been so widespread.

## Different perspectives on the purpose of public broadcasting

In scholarly discussions about PSM, the point of departure is typically addressed in one of two ways. One way is informed by the materiality of practice to indicate how these institutions act and react in political, economic, and technological contexts. This is a practical perspective that prioritises PSM in competitive environments. Alternatively, discussions of PSM centre on normative ideals about the roles and functions these institutions have in facilitating democratic communication, deliberation, and participation among citizens. From this perspective, PSM is idealised as an institution that is supposed to be a central hub for societal deliberations that are needed to produce and reproduce societal coherence. The focus of discussion is on the degrees to which PSM organisations achieve the ideals in practice.

In recent years, the latter perspective has been less privileged, prompting concerns about the “death of public service broadcasting” (see Søndergaard, 1999; Tracey, 1998). There is little evidence that this description is valid given the manifest capabilities for renewal that established PSB firms have demonstrated since the mid-1980s. Bolin (2004) suggested that the transformative power of PSB – its ability to morph – has ensured its institutional survival. That ability implies that PSM is less driven by doctrine and dogma than many might prefer, and more driven by practical interests in organisational sustainability under evolving and variable societal, political, and economic conditions. This, in turn, would suggest a market-based understanding of PSM is more characteristic than historic interests in normative prescriptions – that certainly has implications for discussions of universalism.

In the early days of broadcasting, all governments needed to regulate radio frequencies, but they approached it in different ways. Generally, universalism was a corollary of monopoly environments. At first, the right to transmit was typically granted to one broadcasting organisation only. That company was required to ensure the signals would be geographically accessible to everyone residing within a national territory. As monopolies, these companies were also

expected to provide programming with universal appeal to general publics that were de facto mass audiences (Van den Bulck & Moe, 2017). A cornerstone of the public service mission in the first decades of practice was to contribute to societal cohesion by facilitating education and enlightenment. All of this is well documented in *The Reith Diaries* (Stuart, 1975).

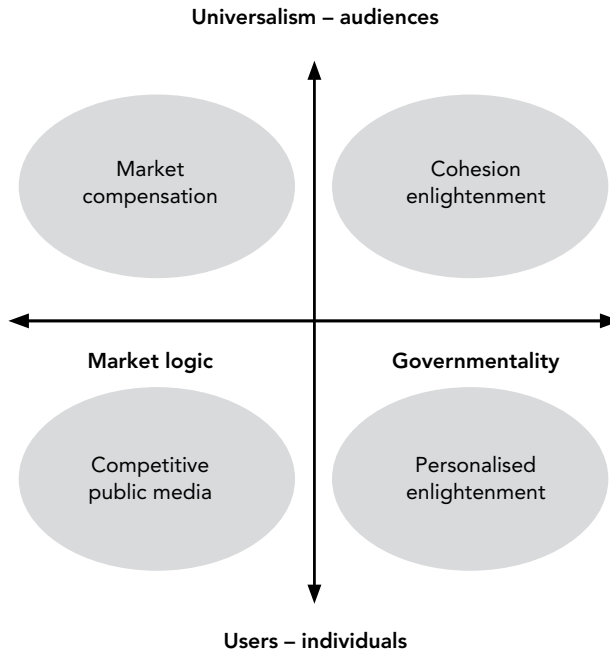
With the introduction of private commercial radio in the 1980s, and later television in the 1990s, concerns were raised about PSB causing market distortion and its presumed role in remedying market failure, pushing aside concerns about cohesion (Henten, 2000; Noam, 1991). Compensating for flaws in market dynamics and showing competitiveness became a core question of operational importance for PSB management in the context of dual-system growth, that is, systems comprised of a public service sector and a private commercial sector competing in media markets (Nissen, 2006). Much of central importance in the decades since the 1980s has to do with deciding the appropriate balance between the two sectors. With personalisation technologies being applied more or less universally in today's global social media platforms and services, it is time to revisit classic arguments for public service as such in media provision. As Nissen (2006: 69) observed, "influencing the listener's or viewer's choices, and thus media consumption pattern, is the very reason why public media were established and why their existence has been upheld even in times of abundant media supply".

The history of shifting arguments for and against PSM has been well treated in a large body of scholarship in the field of political economy. At one end of an axis of argumentation is the market-compensation perspective that suggests PSM is a remedy for market failure but distorts the competitive possibilities for commercial media. Here, the focus is often on arguments that suggest PSM should only fill the non-profitable gaps in a commercial market. At the other end of the axis, discussion prioritises the importance of social cohesion to emphasise PSM's role as a mediator in democratic processes, and (more rarely) in mediating periods of national crisis. Here, economic arguments do not hold true, because the logic is less about economic concerns and rests primarily on the self-interested need for sustainability of nation-states. These arguments can be well explained with Foucault's concept of governmentality (Foucault & Pasquino, 1991).

In Figure 1, the economic-organisational arrangements of PSM can be presented as one axis that is anchored by market logic at one end and governmentality at the other. A bisecting axis is anchored by universalism of audiences at one end and users as individuals at the other. The point of departure is grounded by Hasebrink and Domeyars's (2010) typology that discerns four layers of an individual's information needs: 1) undirected information needs; 2) thematic interests; 3) group-identity related information needs; and 4) specific personal information needs. Their typology is focused on the individual whose needs can

be addressed by various platforms, including mass media and social media. Each can address various layers of information need. This perspective encourages looking at the objective of PSM from a perspective other than the traditional focus on PSM as institutions. That is helpful when the role and potential of personalisation technologies are examined in the PSM context.

**Figure 1.** Four purposes of public service media and public service broadcasting



*Comment:* Figure from Sørensen (2011), adapted for use in this chapter.

Personalised recommender systems are often presented as tools to create a more personally relevant selection of content. According to software developers and computer scientists (Hongguang et al., 2005; Ricci et al., 2015; Singh et al., 2015; Zimmerman et al., 2004), 1) the purpose is to satisfy the information needs and desires of the user as a “customer-king”, and 2) to protect the user from information overflow (Franck, 1998; Mitchell, 2005; Simon, 1971).

Whether recommender systems actually deliver on these propositions – and whether information overflow actually exists – deserves critical consideration that will have to wait for another opportunity. Here, we note that personalisation technologies claim to work in the interests of the individual. While at first glance a centralised agenda-setting function seems to clash with the individuals’ search for and use of media content, recent scholarship (Schmidt et al., 2018) remind us that the same person can have different roles when using media. At

the same time, a user can be 1) a consumer searching for personal gratification; 2) a person with individual rights (e.g., not being discriminated against); and 3) a citizen belonging to a democratic society (e.g., being well-informed about the society). Our model encompasses users as citizens with needs and rights, and consumers with personal, group-identity-related or thematic information interests.

The intersection of the two axes suggests four types of objectives, purposes, or roles for PSM. In the upper-left quadrant, where market logic intersects with the classical idea of universalism, a primary objective of PSM is to provide market-failure compensation. The programming and services should fill unprofitable gaps in media markets, but nothing else. Programming is defined by normative ideas that prescribe what belongs to a nation's culture and public life. PSM should take care of those concerns and stay away from anything that would "distort" competition for commercial media. Moving to the upper-right quadrant, the objective of PSM is defined by a commonwealth interest in societal cohesion and growing enlightenment, which ignores the economic logic of markets. The programming of monopoly PSB conformed largely to this type of "cohesion-enlightenment" PSB.

In the lower left quadrant, we have "competitive public media". Here the objective is to demonstrate competitiveness while maintaining a distinctive orientation and tone that aims to persistently achieve a public service practice in programming. This is not so easy, because aesthetics and topics will have similarities with commercial media because production methods and strategies are shaped by competition. A quantifiable popularity is important for programme selection and scheduling, and publishing strategies are optimised accordingly. In the era of broadcasting, public service obligations were addressed by scheduling popular content to "lead" viewers into weightier public service fare. At the same time, as noted earlier, PSB niche channels were launched to satisfy the interests of targeted segments with thematic content. In today's world of digital on-demand media, methods and tools are borrowed from commercial practice in personalised algorithmic recommender systems. Most PSM operators today are engaged in competitive public media.

In the fourth quadrant, where governmentality and individual users meet, there are no obvious examples yet. This suggests that new forms of PSM are possible, which I have earlier described as "personalised enlightenment" (Sørensen, 2011: 304). In principle, one could expect to find enlightening and educational content that is tailored to fit individual needs and address the wider shared interests of society. The danger, of course, is that it might become a technologically updated version of the paternalistic orientation.

This would be compatible with ideals related to empowerment and agency that fuel de-liberalistic democratic PSM practice, it is possible that personalised enlightenment could be developed in appropriate ways. This would both require

and facilitate liberating the concept of universalism from the strict confines of the classical public sphere construct and simultaneously avoiding a paternalistic state perspective. The path forward would be a clear and persistent focus on the need to ensure that all citizens have ample opportunities to be equally well informed about topics of mutual importance. One must be careful not to erode appreciated individual freedoms and the right to form and express personal opinions (Helberger, 2012). That being accepted, there is the possibility for a “diversity diet” (Sørensen & Schmidt, 2016) as a mandate for PSM. Although admittedly complicated and unlikely to satisfy proponents of a radical degree of liberal media market “freedom”, as algorithms increasingly take over the role of curation in content selection, the opportunity to address this in practice is quite doable. If understood as exposure diversity, universalism in the twenty-first century digital media ecology might be largely about curating for enlightenment.

## Conclusion

In this chapter, I have discussed the relation between two apparently incompatible concepts – universalism and personalisation. These concepts seem incompatible in normative terms because the former insists on such an all-encompassing totality that the individual is at risk of disappearing into the undifferentiated masses, while the latter insists on a supremacy of the individual so that everything other than custom-made products would be unsatisfactory.

In fact, universalism has never been that in practice, but only an earnest effort in the context of PSM’s role in serving a national cultural sphere that has become increasingly narrowed by these organisations’ need to stand out as recognisable brands with clear competitive profiles. Moreover, the very idea of a national culture has been both criticised and embraced, the latter in largely mythical terms. The pursuit of national universalism remains important, but is under severe pressure from a much stronger and quite popular phenomenon of global universalism as the result of limited number of international media and technology companies that advance and adhere to an increasingly global set of digital technical standards. These standards now include algorithmic personalisation technologies.

Perhaps ironically, personalisation technologies do not necessarily deliver the promised protection against information overload or guarantee the promised degree of customer sovereignty. In practice, they serve as technical tools for creating, managing and predicting audiences in much the same way as scheduling did in the broadcast era. In short, they serve the publishers’ interests as much, or more, than users’ interests.

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